Patent Claims

1-22. (Canceled)

23. An instrument for implanting a cervical intervertebral prosthesis including two anchoring plates and a prosthesis core arranged between them, the instrument comprising a handle, a stem, and a head part which is arranged at an end of the instrument remote from the handle and whose dimensions are chosen such that the head part can be inserted into an implantation space that has been created between adjacent vertebral bodies for receiving the intervertebral prosthesis, the head part comprising an excavating element configured for creating a recess in a cranial-caudal direction in the adjacent vertebral bodies and an actuating device provided for the excavating element which is movable between a rest position, in which the actuating device is retracted in the head part, and a working position, in which the actuating device protrudes from the head part transversely with respect to the stem.

24. The instrument as claimed in claim 23, wherein the excavating element is a cutter disk.

25. The instrument as claimed in claim 24, wherein the cutter disk has at least one pair of cutting fins arranged in an offset manner about its circumference.

26. The instrument as claimed in claim 25, wherein the cutting fins have different heights.

27. The instrument as claimed in claim 25 or 26, wherein the cutting fins are arranged in pairs lying opposite one another.

28. The instrument as claimed in claim 23, wherein the excavating element is a drill.

29. The instrument as claimed in claim 28, further comprising a pushing/screwing drive mechanism configured for actuating the drill.

30. The instrument as claimed in claim 28 or 29, wherein at least two drills are arranged transversely with respect to the stem.

31. The instrument as claimed in claim 28 or 29, wherein the excavating element has a spherical cutter section.

32. The instrument as claimed in claim 23, 24, 25, 26, 28 or 29, wherein the excavating element is longitudinally movable along a guide.

33. The instrument as claimed in claim 23, 24, 25, 26, 28 or 29, wherein the actuating element comprises a handle and a transmission shaft.

34. The instrument as claimed in claim 23, 24, 25, 26, 28 or 29, wherein the actuating element has a rotary drive coupling.

35. A cervical intervertebral prosthesis, comprising a lower anchoring plate and an upper anchoring plate, each of which has an anchoring plate surface for bearing on an adjacent vertebral body, and a prosthesis core arranged between the lower and upper anchoring plates which creates an articulated connection between the anchoring plates,

wherein at least one of the two anchoring plate surfaces comprises a projection configured for a form-fit engagement in the vertebral body transverse to an anterior-posterior direction relative to its location of implantation.

36. The cervical intervertebral prosthesis as claimed in claim 35, wherein the projection is arranged outside an edge area of at east one of the anchoring plate surfaces.

37. The cervical intervertebral prosthesis as claimed in claim 36, wherein the projection is offset from the center of its anchoring plate surface in posterior direction relative to the location of implantation in an area between 3/5 and 3/4 of the extent of the anchoring plate surface in the anterior-posterior direction.

38. The cervical intervertebral prosthesis as claimed in claim 35, 36 or 37, wherein the projection has a height of 0.3 to 5.0 mm above the level of the anchoring plate surface.

39. The cervical intervertebral prosthesis as claimed in claim 38, wherein the projection has a height of 1.0 to 3.0 mm above the level of the anchoring plate surface.

40. The cervical intervertebral prosthesis as claimed in claim 36, 37 or 38, wherein the projection has a spherical section.

41. The cervical intervertebral prosthesis as claimed in claim 36, 37 or 38, wherein the projection is divided into two or more segments with a gap lying between the segments.

42. The cervical intervertebral prosthesis as claimed in claim 41, wherein the segments are configured in the shape of a bolt.

43. A method for implanting a cervical intervertebral prosthesis comprising two cover plates with a prosthesis core arranged therebetween, the method comprising:

a) spreading two adjacent vertebral bodies apart,

b) working end faces of the vertebral bodies to create a seat for the cover plates,

c) using an instrument with a head part and an excavating element which can emerge from the excavating element in a cranial-caudal direction to create a recess in the cranial-caudal direction in at least one end face of the adjacent vertebral bodies,

d) removing the instrument and inserting the intervertebral prosthesis which, on at least one surface of the cover plates directed toward the vertebral body, has a projection engaging in the recess.

44. The method as claimed in claim 43, wherein the instrument further comprises a handle and a stem, and the head part is arranged at an end of the instrument remote from the handle and has dimensions are chosen such that the head part can be inserted into the recess, the head part further comprising an actuating device provided for the excavating element which is movable between a rest position, in which the actuating device is retracted in the head part, and a working position, in which the actuating device protrudes from the head part transversely with respect to the stem.

45. The method as claimed in claim 43 or 44, wherein the intervertebral prosthesis comprises a lower anchoring plate and an upper anchoring plate, each of which has an anchoring plate surface for bearing on an adjacent vertebral body, and a prosthesis core arranged between the lower and upper anchoring plates which creates an articulated connection between the anchoring plates,

wherein at least one of the two anchoring plate surfaces comprises a projection configured for a form-fit engagement in the vertebral body transverse to an anterior-posterior direction relative to its location of implantation.